

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 27 DEC 2001

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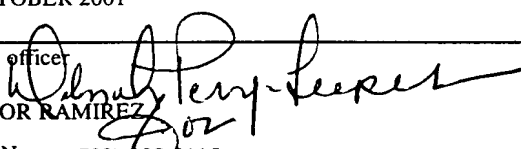
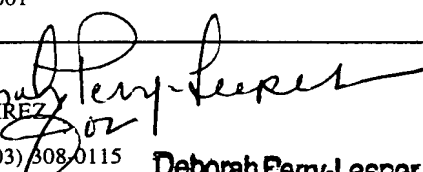
Applicant's or agent's file reference 71364-2	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US00/14139	International filing date (day/month/year) 23 MAY 2000	Priority date (day/month/year) 07 JULY 1999
International Patent Classification (IPC) or national classification and IPC IPC(7): H02K 1/06, 1/34, 3/04, 33/18 and US Cl.: 310/13; 335/282		
Applicant ADH INTERNATIONAL		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 3 sheets.
- ☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority. (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 0 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of report with regard to novelty, inventive step or industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 05 FEBRUARY 2001	Date of completion of this report 10 OCTOBER 2001
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231	Authorized officer  NESTOR RAMIREZ
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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US00/14139

I. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☒ the description:
pages 1-8 , as originally filed
pages NONE , filed with the demand
pages NONE , filed with the letter of _____
- ☒ the claims:
pages 9-11 , as originally filed
pages NONE , as amended (together with any statement) under Article 19
pages NONE , filed with the demand
pages NONE , filed with the letter of _____
- ☒ the drawings:
pages 1-3 , as originally filed
pages NONE , filed with the demand
pages NONE , filed with the letter of _____
- ☒ the sequence listing part of the description:
pages NONE , as originally filed
pages NONE , filed with the demand
pages NONE , filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☒ The amendments have resulted in the cancellation of:

- ☒ the description, pages NONE
- ☒ the claims, Nos. NONE
- ☒ the drawings, sheets/fig NONE

5. ☐ This report has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

**Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US00/14139

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. statement**

Novelty (N)

Claims 5, 7, 11-15 and 18

YES

Claims 1-4, 6, 8-10, 16, 17 and 19

NO

Inventive Step (IS)

Claims 13 and 18

YES

Claims 1-12, 14-17 and 19

NO

Industrial Applicability (IA)

Claims 1-19

YES

Claims NONE

NO

2. citations and explanations (Rule 70.7)

Claims 1, 3, 4, 6, 8 and 10 lack novelty under PCT Article 33(2) as being anticipated by Stupak, Jr. Stupak, Jr. discloses a voice coil actuator comprising a coil 48 carried by an armature 46, and a magnet 30,32 located within a housing 34,36,38 with the armature axially movable relative to the housing with housing portions 36,38 being nonuniform. In figures 9 and 10, Stupak, Jr. discloses a coil having a single winding.

Claims 1, 2, 4, 8-10, 16, 17 and 19 lack novelty under PCT Article 33(2) as being anticipated by Sukagawa et al. Sukagawa et al. discloses a voice coil actuator comprising a radially movable coil carried by an armature and a magnet 33 located on a housing with a nonuniform magnet and a nonuniform housing.

Claim 5 lacks an inventive step under PCT Article 33(3) as being obvious over Stupak, Jr. in view of Suzuki et al. Stupak, Jr. discloses the actuator but does not disclose a magnet carried on an armature. Suzuki et al. teaches that an actuator can have either magnets or coils on the armature.

Claims 7, 11, 12, 14 and 15 lack an inventive step under PCT Article 33(3) as being obvious over Stupak, Jr. in view of Michl. Stupak, Jr. discloses the actuator but does not show tapering the coil. Michl teaches tapering the coil instead of the housing or magnet to make the actuator more linear. Figures 2 and 3 show discontinuously tapered coils with the coils not being tapered at each end.

Claims 5,7,11-15 and 18 meet the criteria set out in PCT Article 33(2), because the prior art does not teach or fairly suggest a voice coil actuator with a nonuniform drive means having the magnet carried by the rotor in a single reference. The prior art does not teach or fairly suggest a tapered coil for a voice coil actuator in a single reference. The prior art does not teach or fairly suggest a voice coil actuator with a nonuniform drive means having a magnet radially contained in the housing.

Claims 13 and 18 meet the criteria set out in PCT Article 33(3), (Continued on Supplemental Sheet.)